

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 9203-2 (1979): Friction Rollers for Mine Haulage Tracks,
Part II: Parallel Rollers [MED 8: Mining Techniques and
Equipment]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



(Reaffirmed 1999)

Indian Standard



SPECIFICATION FOR FRICTION ROLLERS FOR MINE HAULAGE TRACKS

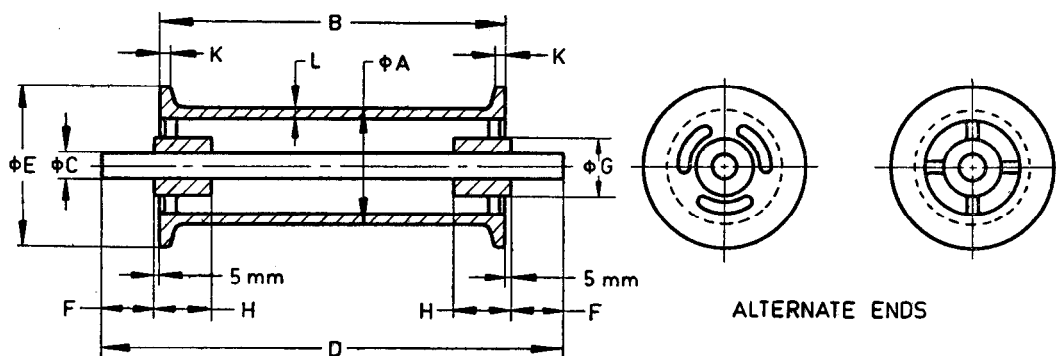
PART II PARALLEL ROLLERS

1. Scope — Covers the requirements for parallel rollers used on mine haulage tracks for guidance of haulage rope.

2. Types — Rollers shall be of either cast or fabricated type using plain or rolling bearings.

3. Dimensions

3.1 Cast Rollers with Plain Bearings



All dimensions in millimetres.

Nominal Size	Diameter of Barrel $A \pm 1.5$	Length of Roller Outside Flanges $B \pm 1.5$	Spindle		$E \pm 1.5$	F	G	H	K	$L \pm 1.5 -0$
			Dia-meter C	Length D						
CP 1	100	230	22	330	140	45	45	50	9.5	9.5
CP 2	100	300	22	400	140	45	45	50	9.5	9.5
CP 3	115	230	22	330	155	45	45	50	9.5	9.5
CP 4	115	300	22	400	155	45	45	50	9.5	9.5
CP 5	125	150	22	250	165	45	45	50	9.5	9.5
CP 6	125	230	22	330	165	45	45	50	9.5	9.5
CP 7	125	300	22	400	165	45	45	50	9.5	9.5
CP 8	150	200	22	300	190	45	45	50	11.0	11.0
CP 9	150	300	22	400	190	45	45	50	11.0	11.0
CP 10	150	460	22	560	190	45	45	50	11.0	11.0
CP 11	200	300	28	430	250	60	60	65	12.5	12.5
CP 12	300	300	38	460	350	75	75	85	12.5	12.5
CP 13	300	450	38	620	350	75	75	85	12.5	12.5

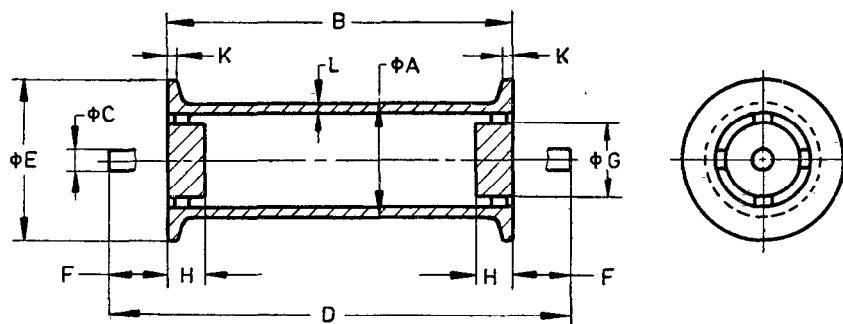
Adopted 7 June 1979

© September 1980, ISI



INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

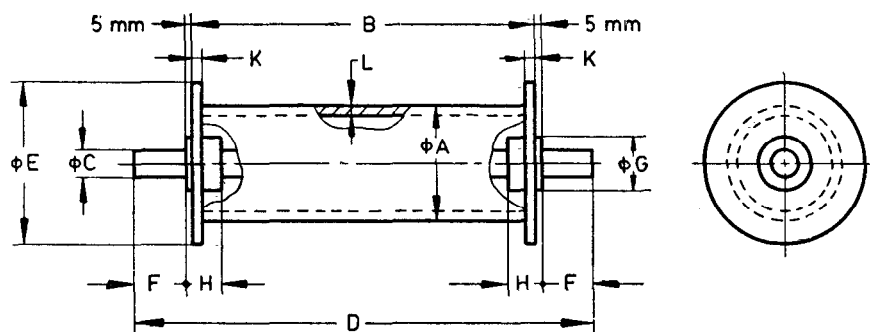
3.2 Cast Rollers to accommodate Internal Rolling Bearings



All dimensions in millimetres.

Nominal Size	Diameter of Barrel A ± 1.5	Length of Roller Outside Flanges B ± 1.5	Spindle		E ± 1.5	F	G	H	K	L $+1.5$ -0
			Diameter C	Length D						
CR 1	100	230	19	330	140	50	65	32	9.5	9.5
CR 2	100	300	19	400	140	50	65	32	9.5	9.5
CR 3	115	230	19	330	150	50	65	32	9.5	9.5
CR 4	115	300	19	400	150	50	65	32	9.5	9.5
CR 5	125	150	19	250	165	50	65	32	9.5	9.5
CR 6	125	230	19	330	165	50	65	32	9.5	9.5
CR 7	125	300	19	400	165	50	65	32	9.5	9.5
CR 8	150	200	25	300	190	50	80	32	11.0	11.0
CR 9	150	300	25	400	190	50	80	32	11.0	11.0
CR 10	150	460	25	560	190	50	80	32	11.0	11.0
CR 11	200	300	25	430	250	65	80	32	12.5	12.5
CR 12	300	300	32	460	350	80	100	38	12.5	12.5
CR 13	300	460	32	620	350	80	100	38	12.5	12.5

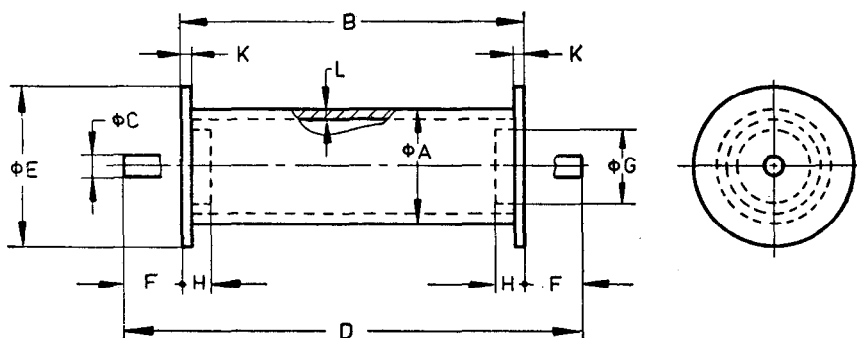
3.3 Fabricated Rollers with Plain Bearings



All dimensions in millimetres.

Nominal Size	Diameter of Barrel A ± 1.5	Length of Roller Outside Flanges B ± 1.5	Spindle		E ± 1.5	F	G	H	K	L
			Diameter C	Length D						
FP 1	100	230	22	330	140	45	45	25	9.5	5
FP 2	100	300	22	400	140	45	45	25	9.5	5
FP 3	115	230	22	330	155	45	45	25	9.5	5
FP 4	115	300	22	400	155	45	45	25	9.5	5
FP 5	125	150	22	250	165	45	45	25	9.5	5
FP 6	125	230	22	330	165	45	45	25	9.5	5
FP 7	125	300	22	400	165	45	45	25	9.5	5
FP 8	150	200	22	300	190	45	45	25	11.0	5
FP 9	150	300	22	400	190	45	45	25	11.0	5
FP 10	150	460	22	560	190	45	45	25	11.0	5
FP 11	200	300	28	430	250	60	60	32	12.5	6
FP 12	300	300	38	460	350	75	75	38	12.5	9.5
FP 13	300	460	38	620	350	75	75	38	12.5	9.5

3.4 Fabricated Rollers to accommodate Rolling Bearings



All dimensions in millimetres.

Nominal Size	Diameter of Barrel $A \pm 1.5$	Length of Roller Outside Flanges $B \pm 1.5$	Spindle		$E \pm 1.5$	F	G	H	K	L
			Diameter C	Length D						
FR 1	100	230	19	330	140	50	65	25	9.5	5
FR 2	100	300	19	400	140	50	65	25	9.5	5
FR 3	115	230	19	330	150	50	65	25	9.5	5
FR 4	115	300	19	400	150	50	65	25	9.5	5
FR 5	125	150	19	250	165	50	65	25	9.5	5
FR 6	125	230	19	330	165	50	65	25	9.5	5
FR 7	125	300	19	400	165	50	65	25	9.5	5
FR 8	150	200	25	300	190	50	80	28	11.0	5
FR 9	150	300	25	400	190	50	80	28	11.0	5
FR 10	150	460	25	560	190	50	80	28	11.0	5
FR 11	200	300	25	430	250	65	80	28	12.5	6
FR 12	300	300	32	460	360	80	100	38	12.5	9.5
FR 13	300	460	32	620	360	80	100	38	12.5	9.5

4. General Requirements — Shall comply in all respect with IS : 9203 (Part I) -1979 ' Specification for friction rollers for mine haulage tracks, Part I Technical supply conditions '.

5. Designation — A cast friction roller of nominal size CP 7 having plain bearings and conforming to this standard shall be designated as:

Friction Roller CP 7 IS : 9203 (Part II)

6. Selection of Rollers

6.1 Rollers with cast in or loose spindle shall not be used at roller speeds exceeding 200 rev/min.

6.2 Rollers bored and with spindles pressed in designed to run in external plain bearings shall not be used at speeds above 500 rev/min.

6.3 Rollers with rolling bearings shall be used at speeds above 500 rev/min. At speeds less than 500 rev/min, they shall be considered for use at places where loading is excessive, for example, on brow of a gradient.

6.4 Rollers with impregnated self-lubricated bearings shall be used for speeds around 1 000 rev/min.

6.5 Sealed, grease packed or impregnated bearings shall be preferred from maintenance point of view.

6.6 For guidance Fig. 1 gives the relationship between rope speed and rev/min of rollers.

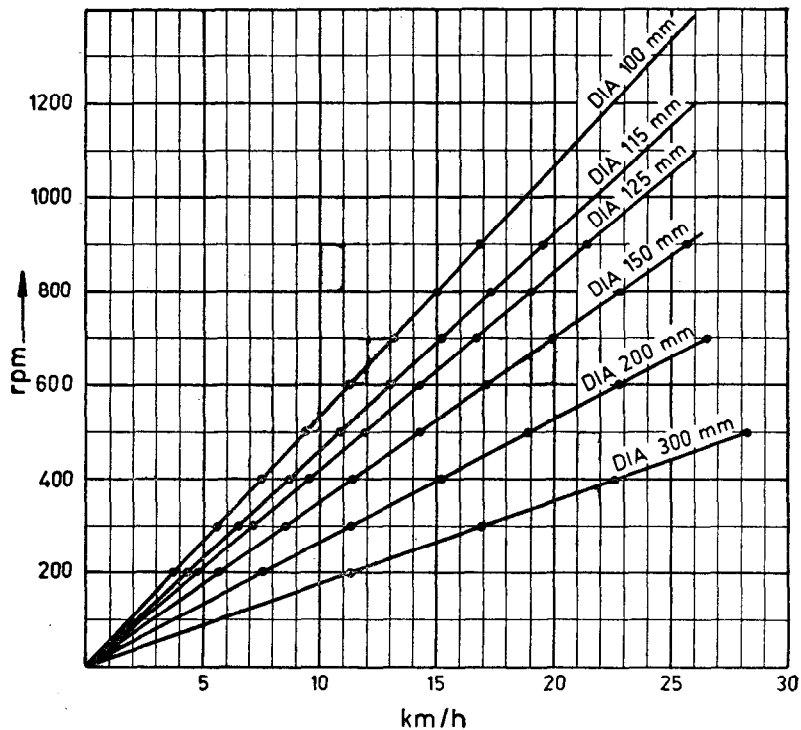


FIG. 1 RELATION BETWEEN ROPE SPEED AND REV/MIN OF ROLLERS

EXPLANATORY NOTE

This standard on friction rollers is being issued in different parts as follows:

- Part I Technical supply conditions
- Part II Parallel rollers
- Part III Tapered and vertical rollers and horizontal and vertical pulleys
- Part IV Rollers with nonmetallic rope bearing surfaces.

In the formulation of this standard considerable assistance has been derived from BS 3876: Part I: 1965 'Specification for rope rollers and mountings for colliery track haulage: Part I Parallel rollers', issued by the British Standards Institution.